CLAIMS

What is claimed is:

1. A method of manufacture comprising the steps:

a. laminating together a pleated filter media with an expanded wire forming a laminate;

b. pleating the laminate forming a filter pack with a pleated first edge and a pleated second edge;

c. forming an inner frame selected from the group consisting of plastic, cardboard, heavy paper, coated paper, and combinations thereof, wherein the inner frame comprises an inner front panel, an inner back panel, an inner top side with a first flap and a second flap, an inner bottom side with a third flap and a fourth flap;

d. adhering the pleated first edge to the inner top side;

e. inserting a support wire between the inner frame and the filter media;

f. adhering the first flap to the second flap and adhering the third flap to the fourth flap forming an inner box to contain the filter media;

g. forming an outer frame selected from the group consisting of plastic, cardboard, heavy paper, coated paper and combinations thereof, wherein the outer frame comprises an outer front panel an outer back panel, an outer top side with a fifth flap and a sixth flap, an outer bottom side with a seventh flap and an eighth flap;

h. adhering the fourth flap to the fifth flap and adhering the sixth flap to the seventh flap forming an outer box and forming the outer first side and the outer second side;

i. inserting a first clip to engage the outer frame with the inner frame; and

j. inserting a second clip to engage the outer frame to the inner frame forming an

expandable air filter.

2. An apparatus for air filtration comprising:

a. a pleated filter media comprising a pleated first edge and a pleated second edge;

b. an expandable mesh portioned on one side of the pleated filter media, wherein the expandable mesh is bonded to the pleated filter media;

c. an outer frame comprising an outer front panel, an outer back panel, an outer top side, an outer bottom side, an outer first side, and an outer second side, wherein the outer front panel and outer back panel are connected at the outer top side the outer bottom side, and the outer side;

d. an inner frame comprising an inner front panel, an inner back panel, an inner top side, an inner bottom side, an inner first side, and an inner second side, wherein the inner front panel and inner back panel are connected at the inner top side the inner bottom side, and the inner side;

e. at least two outer front supports members and in the outer front panel creating an outer front panel opening;

f. at least two outer back supports members and in the outer back panel creating an outer back panel opening;

g. at least two inner front supports members and in the inner front panel creating an inner front panel opening;

h. at least two inner back supports members and in the inner back panel creating an inner back panel opening;

i. wherein the inner frame slides into the outer frame between the outer front panel and outer back panel;

j. a plurality of clips to hold the outer frame to the inner frame; and

k. wherein the pleated filter media is disposed inside the outer frame and the inner frame and the pleated first edge is attached the outer first side and the pleated second edge is attached to the inner first side.

3. The apparatus of claim 2, wherein the pleated filter media has between 4 pleats per foot and 30 pleats per foot.

4. The apparatus of claim 2, wherein the pleated filter media is an electrostatic filter media that is made of a member selected from the group consisting of synthetic and cotton blend.

5. The apparatus of claim 2, wherein the outer frame and the inner frame comprise a shape selected from the group consisting of rectangle, square, and circle.

6. The apparatus of claim 2, further comprising a locking component disposed on the outer frame to prevent movement of the inner frame while supporting the filter media.

7. The apparatus of claim 2, wherein the locking component is tape.

8. The apparatus of claim 7, wherein the locking component is a slidable tab adapted for engaging the outer frame and the inner frame.

9. The apparatus of claim 2, wherein the expandable mesh is an expanded aluminum mesh.

10. The apparatus of claim 2, wherein the expandable mesh is laminated with glue.

11. The apparatus of claim 2, wherein the at least two front support members and the at least two back support members each form a shape from the group: an "X" shape, a "diamond" shape, die cut design, rectangular shape, square shape, a shape of a circle with radial arms, and combinations thereof.

12. The apparatus of claim 11, wherein the die cut design is a logo for a company.

13. The apparatus of claim 2, wherein the outer frame further comprises a first horizontal support and a first vertical support and the inner frame further comprises a second horizontal support and a second vertical support.

14. The apparatus of claim 2, wherein the outer frame further comprises a first circle support member engaging at least two opposing edges on the first frame and the inner frame with a first arm and a second arm further comprises a second circle support member engaging at least two opposing edges on the second frame.

15. The apparatus of claim 2, wherein the bonded wire mesh is laminated to the filter media.

16. The apparatus of claim 2, wherein the wire mesh is a welded wire.

17. The apparatus of claim 2, further comprising a measuring tape disposed on the inner frame.

18. The apparatus of claim 2, wherein the outer frame and the inner frame are notched to support the clips.

19. The apparatus of claim 2, wherein the inner frame is plastic, cardboard, heavy paper, beverage board, craft paper, or combinations thereof.

20. The apparatus of claim 19, wherein the inner frame is coated.

21. The apparatus of claim 2, wherein the outer frame is plastic, cardboard, heavy paper, beverage board, craft paper, or combinations thereof.

22. The apparatus of claim 21, wherein the outer frame is coated.